

SOUTHERN REGION AIS SUMMARY (2011 Boating Season)

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General

Region Wide Operations

One Biologist I position funded for 12 months by UDWR (\$71,567 project E1A520xxx) to manage the regional AIS program and supervise the Wildlife Technician II position along with a segment of the Wildlife Technician I positions.

Note: Crystal Stock (AIS Biologist I) resigned during October 2011, and Nicolas Braithwaite was hired as the new AIS Biologist I in January 2012.

One Wildlife Technician II position funded for 7 months by UDWR (\$24,169 project E1A520xxx) to rove between regional waters as needed and to supervise a segment of the Wildlife Technician I positions.

Water-By-Water Reports

- **Budget, Personnel & Equipment**
 - FY11 UDWR & Partner funds amounted to \$296,734.45 and supported operations for one AIS biologist and 13 technicians.
 - MOU with Otter Creek and Piute State Park resulted in 2 technicians
 - MOU with Sand Hollow Complex State Park resulted in 4 technicians
 - 132 hours of Law Enforcement were worked, amounting to \$4,944.72 in operation costs.
 - 10 trailer-mounted units decontamination units were assigned to the region as follows:
 - 4 containment units located at Sand Hollow Reservoir
 - 5 interdiction units located at Fish Lake, Gunlock, Otter Creek, Panguitch Lake, Regional Office (roving unit)
- **Outreach**
 - Public presentations at Utah Boat Show, International Sportsman Expo and Utah Water Users Association.
 - Several media releases occurred on the radio and television and in local area newspapers.
 - 19,713 watercraft were interdicted, inspected for AIS and educated about quagga & zebra mussel issues.

- 2,029 hours of volunteer effort, equaling \$42,339.99, were worked under authority of UDWR’s Volunteer Program, targeting watercraft interdiction, decontamination of boats, inspection for AIS & education about quagga & zebra mussel issues at the Sand Hollow State Park Complex waters.
- The AIS biologist is certified as a “Level II Water Craft Inspection Trainer.” So, “Level I Watercraft Inspection Training” was conducted amongst UDWR, SP&R, natural resource management agencies, Tribal, and marina personnel.
- **Decontaminated & Encrusted Boats**
 - 2,432 boats were decontaminated due to them being used on a quagga or zebra mussel affected waters in North America within the previous 30 days.
 - 2 Encrusted boats were decontaminated at a local watercraft repair shop- both boats had been in Lake Mead and all mussels observed were dead.
- **Presence/Absence of Quagga & Zebra Mussels**
 - A single live adult Quagga mussel (*Dreissena bugensis*) was discovered in Sand Hollow Reservoir on May 21, 2010.
 - Positive PCR results for samples in April/July (pooled), August, September, and October were found.
- **Law Enforcement (UDWR Conservation Officers enforced AIS regulations)**
 - 1,904 contacts
 - No “Notice to Appear” in court citations
 - 318 vehicles were recorded in the FATPOT system as not in compliance with AIS Rule and issued warnings.
 - 11 Citations were issued for non compliance with the AIS Rule

SOUTHERN REGION Water-By-Water Reports

Region Wide Operations

One Biologist I position funded for 12 months by UDWR (\$71,567 project E1A520xxx) managed the regional AIS program and supervised Wildlife Technician I positions.

One Wildlife Technician II position funded for 2 months by UDWR used to rove between regional waters as needed and to supervise a segment of the Wildlife Technician I positions.

Fish Lake

- 1) Budget, Personnel & Equipment
 - a) UDWR \$16,490 (program E1A520xxx); 1 technician assigned June through September (4 months).
 - b) One \$13,400 decontamination unit purchased with UDWR funds in FY08 (program E1A520xxx).

- 2) Outreach
 - a) Several media releases occurred on the radio and television and in local area newspapers.
 - b) “Zap the Zebra” brochures as reminders about “Clean, Drain & Dry” and “Decontamination Certification Forms” were given to boaters at boat launches.
 - c) 357 boats were interdicted, inspected and educated.
 - i) Most asked (49) were from Utah, but 4 were from Nevada; the remainder were from California (1), Idaho (2), and Wyoming (1).

- 3) Decontaminations & Encrusted Boats
 - a) No boats were decontaminated.

- 4) Boater History of Last Water Visited (220 interviews)
 - a) Last Water Visited
 1. Fish Lake = 137 (62%)
 2. Strawberry Res. = 16 (7%)
 3. Otter Creek Res. = 8 (4%)
 4. Lake Powell = 7 (3%)
 5. Panguitch Lake = 7 (3%)
 6. Utah Lake = 7 (3%)

- 5) Assessment for Presence/Absence of *Dreissena veligers* via Plankton Samples
 - a) Plankton samples were all sent to the Bureau of Reclamation’s microscopy lab in Denver, CO; all were found to be negative.

- 6) Compliance Data
 - a) 137 boats were checked 122 or 89% were in compliance with AIS rules

- 7) Law Enforcement Efforts
 - a) Regional Conservation Officers assisted with the interdiction, inspection and education of boaters during their routine boater/angler checks. Written warnings were given to boaters that were non-compliant with the self certification process. No “Notice to Appear” in court citations were issued.
 - i) 9 contacts – 0 recorded violations

Gunlock Reservoir

- 1) Budget, Personnel & Equipment

- a) UDWR \$13,500 (program E1A520xxx); 1 technician assigned May thru September (5 months). Technician was hired in cooperation with State Parks via an MOU
 - b) One \$13,400 decontamination unit purchased with UDWR funds in FY08 (program E1A520xxx).
- 2) Outreach
- a) Several media releases occurred on the radio and television and in local area newspapers.
 - b) “Zap the Zebra” brochures as reminders about “Clean, Drain & Dry” and “Decontamination Certification Forms” were given to boaters at boat launch.
 - c) 579 boats were interdicted, inspected and educated.
- 3) Decontaminations & Encrusted Boats
- a) No decontaminations for suspect boats where conducted. No boats were found encrusted with Quagga mussels.
- 4) Boater History of Last Water Visited (Interviews were only conducted on 310 boaters in 2011)
- a) Last Water Visited
 - 1. Gunlock = 205 (66%)
 - 2. Sand Hollow = 28 (9%)
 - 3. Unknown = 4 (1%)
 - 4. Quail Creek Res. = 20 (7%)
 - 5. Lake Powell = 15 (5%)
- 5) Assessment for Presence/Absence of *Dreissena veligers* via Plankton Samples
- a) Plankton samples were all sent to the Bureau of Reclamation’s microscopy lab in Denver, CO; all were found to be negative.
- 6) Compliance Data
- a) Insufficient data was collected to evaluate
- 7) Law Enforcement Efforts
- b) Regional Conservation Officers assisted with the interdiction, inspection and education of boaters during their routine boater/angler checks. Written warnings were given to boaters that were non-compliant with the self certification process. No “Notice to Appear” in court citations were issued.
 - i) 40 contacts – 0 recorded violations

Lake Powell (Glen Canyon National Recreation Area)

The National Park Service (NPS) manages the Glen Canyon National Recreation Area. They conduct a very aggressive and effective AIS program, costing them over \$1million per year. UDWR provides the NPS a \$22,000 annual grant to assist in their AIS management. Details for numbers of boats interdicted/educated, decontaminated, encrusted and law enforcement contacts are included with UDWR's statewide summary.

Otter Creek Reservoir

- 1) Budget, Personnel & Equipment
 - a) UDWR \$16,200 (program E1A520xxx); 1 technician assigned April thru September (6 months). Technician was hired in cooperation with State Parks via an MOU.
 - b) One \$13,400 decontamination unit purchased with UDWR funds in FY08 (program E1A520xxx).

- 2) Outreach
 - a) Several media releases occurred on the radio and television and in local area newspapers.
 - b) "Zap the Zebra" brochures as reminders about "Clean, Drain & Dry" and "Decontamination Certification Forms" were given to boaters at boat launches.
 - c) 1,739 boats were interdicted, inspected, and educated.

- 3) Decontaminations & Encrusted Boats
 - a) 7 boats were decontaminated

- 4) Boater History of Last Water Visited
 - a) No data was collected for last boating location

- 5) Assessment for Presence/Absence of *Dreissena veligers* via Plankton Samples
 - a) Plankton samples were all sent to the Bureau of Reclamation's microscopy lab in Denver, CO; all were found to be negative.

- 6) Law Enforcement Efforts
 - c) Regional Conservation Officers assisted with the interdiction, inspection and education of boaters during their routine boater/angler checks. Written warnings were given to boaters that were non-compliant with the self certification process. No "Notice to Appear" in court citations were issued.
 - i) 131 contacts – 4 written warnings

Piute Reservoir

- 1) Budget, Personnel & Equipment

- a) UDWR \$10,800 (program E1A520xxx); 1 technician assigned May and August (4 months). Technician was hired in cooperation with State Parks via an MOU.
 - b) Pressure wash unit at Otter Creek was used when required. No pressure unit was kept at Piute Reservoir
- 2) Outreach
- a) Several media releases occurred on the radio and television and in local area newspapers.
 - b) “Zap the Zebra” brochures as reminders about “Clean, Drain & Dry” and “Decontamination Certification Forms” were given to boaters at boat launches.
 - c) No data on boat counts have been received from State Parks
- 3) Decontaminations & Encrusted Boats
- a) Any boats needing decontamination were sent to Otter Creek State Park and included in the Otter Creek numbers.
- 4) Assessment for Presence/Absence of *Dreissena veligers* via Plankton Samples
- a) Plankton samples were all sent to the Bureau of Reclamation’s microscopy lab in Denver, CO; all were found to be negative.
- 5) Law Enforcement Efforts
- d) Regional Conservation Officers assisted with the interdiction, inspection and education of boaters during their routine boater/angler checks. Written warnings were given to boaters that were non-compliant with the self certification process. No “Notice to Appear” in court citations were issued.
 - i) 1 contact – 0 recorded violations

Panguitch Lake

- 1) Budget, Personnel & Equipment
 - a) USFS \$19,998 (program E4F480xxx); 1 technicians assigned June thru September (4 months).
 - b) One \$13,400 decontamination unit; purchased by USFS and transferred to UDWR in FY09.
- 2) Outreach
 - a) Several media releases occurred on the radio and television and in local area newspapers.
 - b) “Zap the Zebra” brochures as reminders about “Clean, Drain & Dry” and “Decontamination Certification Forms” were given to boaters at boat launches.
 - c) 493 boats were interdicted, inspected and educated.

- i) Over 50% were from Nevada and California both infested with *Dreissena* mussels.
- 3) Decontaminations & Encrusted Boats
 - a) Six boats were decontaminated.
 - i) 6 were from Lake Mead
- 4) Assessment for Presence/Absence of *Dreissena* veligers via Plankton Samples
 - a) Plankton samples were all sent to the Bureau of Reclamation's microscopy lab in Denver, CO; all were found to be negative.
- 5) Law Enforcement Efforts
 - e) Regional Conservation Officers assisted with the interdiction, inspection and education of boaters during their routine boater/angler checks. Written warnings were given to boaters that were non-compliant with the self certification process. No "Notice to Appear" in court citations were issued.
 - i) 132 contacts – 46 written warnings

Quail Creek

- 1) Budget, Personnel & Equipment
 - a) UDWR \$18,900 (program E1A520xxx); 1 technician assigned April thru October (7 months). Technician was hired in cooperation with State Parks via an MOU.
 - b) Pressure wash unit at Sand Hollow was used when required. No pressure was unit was kept at Quail Creek Reservoir
- 2) Outreach
 - a) Several media releases occurred on the radio and television and in local area newspapers.
 - b) "Zap the Zebra" brochures as reminders about "Clean, Drain & Dry" and "Decontamination Certification Forms" were given to boaters at boat launch.
 - c) Close to 100% or 695 boats were interdicted, inspected and educated. Boaters are contacted as users enter the park. However, data was only collected for 305 watercraft.
- 3) Decontaminations & Encrusted Boats
 - a) No boats were decontaminated at Quail Creek Reservoir. All boats requiring decontamination were sent to Sand Hollow and subsequent data collected on those individuals is included within total decontaminations conducted there.
- 4) Boater History of Last Water Visited
 - a) Last Water Visited (305 interviews)

1. Quail Creek Reservoir = 188 (62%)
 2. Sand Hollow Reservoir = 61 (20%)
 3. Not used yet this year= 20 (7%)
 4. Lake Powell = 6 (2%)
 5. Unknown = 6 (2%)
- 5) Assessment for Presence/Absence of *Dreissena veligers* via Plankton Samples
- i) Plankton samples were all sent to the Bureau of Reclamation's microscopy lab in Denver, CO; all were found to be negative.
 - ii) A positive PCR result for *Dreissena* occurred in September. However, the positive PCR did not occur prior to or after this discovery. It is ranked as a negative find, since it was not supported by microscopy nor did it reoccur. This observation merits watching during the 2012 boating season.
- 6) Compliance Data
- a) Compliance was assumed to be at or near 100% all boater were contacted prior to launching.
- 7) Law Enforcement Efforts
- a) Regional Conservation Officers assisted with the interdiction, inspection and education of boaters during their routine boater/angler checks. Written warnings were given to boaters that were non-compliant with the self certification process. No "Notice to Appear" in court citations were issued.
 - i) 97 contacts

Sand Hollow Reservoir

- 2) Budget, Personnel & Equipment
 - a) UDWR \$29,700 (program E1A520XXX); Hired multiple technicians to fulfill AIS needs for April thru June in cooperation with State Parks via an MOU.
 - b) UDWR \$80,800 (program E1A520XXX); Hired multiple technicians to fulfill AIS needs for July thru June, 2012 in cooperation with State Parks via an MOU.
 - c) Five \$13,400 decontamination units purchased with UDWR funds in FY08 (2) and FY11 (3) (program E1A520xxx).
 - d) UDWR Volunteers accounted for 30% (2,029 man hours or approximately \$42,340) of the work force required at the Sand Hollow State Park Complex.
- 3) Outreach

- a) Numerous media releases occurred on the radio and television and in local area newspapers.
 - b) “Zap the Zebra” brochures as reminders about “Clean, Drain & Dry” and “Decontamination Certification Forms” were given to boaters at the entrance gate.
 - c) Over 15,500 boats were interdicted, inspected and educated as they entered and departed Sand Hollow State Park from May through November.
- 4) Decontaminations & Encrusted Boats
- a) 2,418 boats were decontaminated
- 5) Boater History of Last Water Visited
- a) Last Water Visited
 - 1. Sand Hollow Reservoir = 9,808 (64%)
 - 2. Quail Creek Reservoir = 1,016 (7%)
 - 3. Lake Powell = 653 (4%)
 - 4. Gunlock = 235 (2%)
 - 5. Lake Mead = 218 (1%)
- 6) Assessment for Presence/Absence of *Dreissena veligers* via Plankton Samples
- a) A single live adult Quagga mussel (*Dreissena bugensis*) was discovered last year in Sand Hollow Reservoir on May 21, 2010.
 - b) Plankton samples were all sent to the Bureau of Reclamation’s microscopy lab in Denver, CO.
 - i) No positive microscopy results were found.
 - ii) Positive PCR results for samples in April/July (pooled), August, September, and October were found.
- 7) Compliance Data
- a) Compliance was assumed to be at or near 100%; all boaters were contacted prior to launching.
- 8) Law Enforcement Efforts
- i) 31 contacts – 0 written warnings

Newcastle Reservoir

- 1) Budget, Personnel & Equipment
 - a) Roving AIS Technician visited Newcastle as time permitted
 - b) Pressure wash unit located at the Southern Region office was used when required. No pressure was unit was kept at Newcastle Reservoir
- 2) Outreach
 - a) Several media releases occurred on the radio and television and in local area newspapers.

- b) “Zap the Zebra” brochures as reminders about “Clean, Drain & Dry” and “Decontamination Certification Forms” were given to boaters at boat launch and available at boat launch site
 - c) Approximately 50 boats were interdicted, inspected and educated as they entered and departed Sand Hollow State Park from May through November.
- 3) Decontaminations & Encrusted Boats
 - a) No boats were decontaminated.
 - 4) Boater History of Last Water Visited
 - a) Boater History was not collected at Newcastle Reservoir
 - 5) Assessment for Presence/Absence of *Dreissena* veligers via Plankton Samples
 - a) Plankton samples were all sent to the Bureau of Reclamation’s microscopy lab in Denver, CO; all were found to be negative.
 - 6) Law Enforcement Efforts
 - b) Regional Conservation Officers assisted with the interdiction, inspection and education of boaters during their routine boater/angler checks. Written warnings were given to boaters that were non-compliant with the self certification process. No “Notice to Appear” in court citations were issued.

Figure 1: Numerical comparison of watercraft washed at Sand Hollow in 2010 and 2011

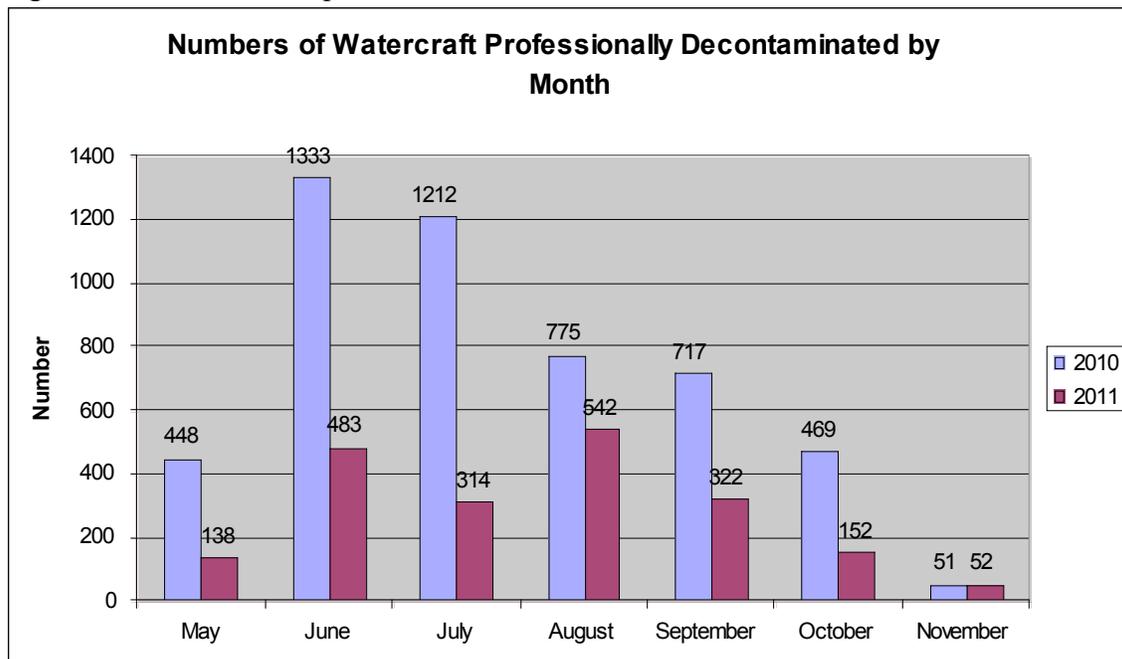


Figure 2: Proportional comparison of watercraft washed at Sand Hollow in 2010 and 2011

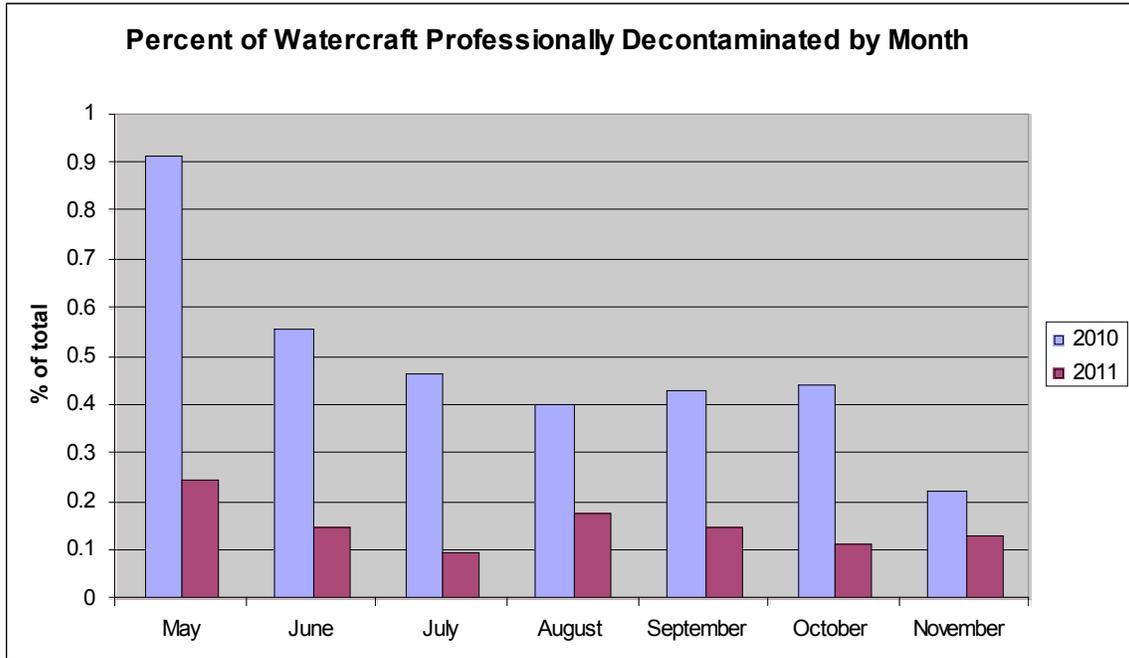


Figure 3: Last water where watercraft was used at Sand Hollow in 2010

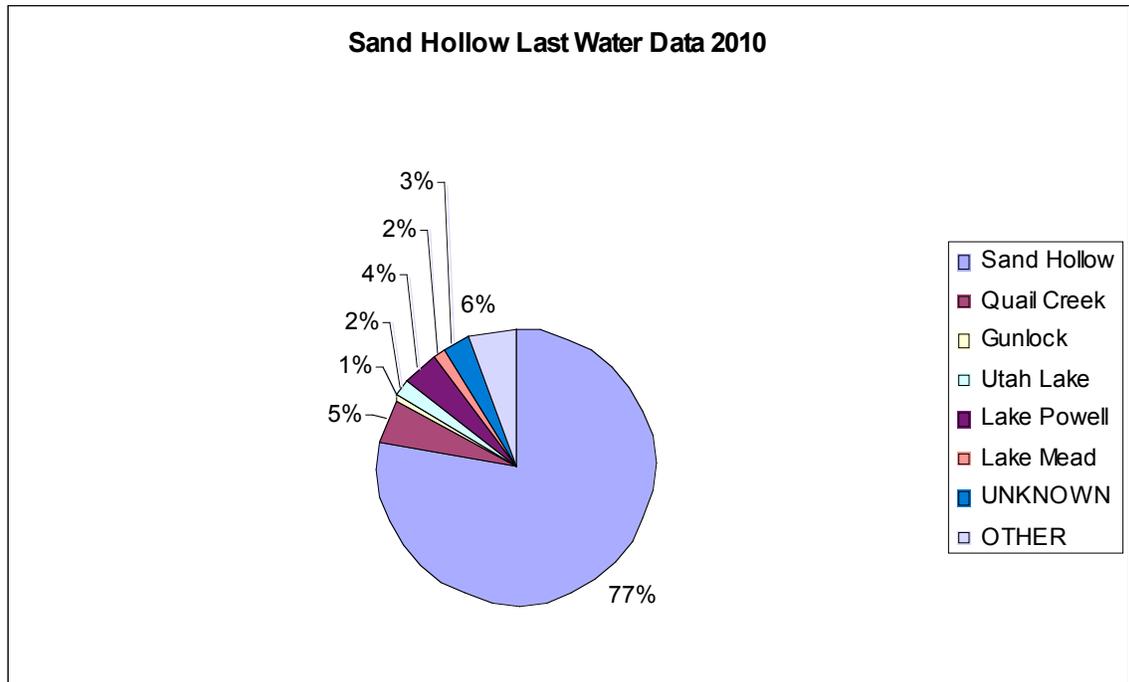


Figure 4: Last water where watercraft was used at Sand Hollow in 2011

